

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Patent Application

Appellant: Mujtaba et al. Confirmation No.: 6641  
Application No.: 10/023,960 Group Art Unit: 3623  
Filed: December 17, 2001 Examiner: Deshpande, K.

For: Method to Define an Optimal Integrated Action Plan For Procurement,  
Manufacturing and Marketing

APPEAL BRIEF

## Table of Contents

	<u>Page</u>
Real Party in Interest	1
Related Appeals and Interferences	2
Status of Claims	3
Status of Amendments	4
Summary of Claimed Subject Matter	5
Grounds of Rejection to Be Reviewed on Appeal	7
Argument	8
Conclusion	15
Appendix – Clean Copy of Claims on Appeal	16
Appendix – Evidence Appendix	20
Appendix – Related Proceedings Appendix	21

I. Real Party in Interest

The assignee of the present application is Hewlett-Packard Development Company,  
L.P.

## II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellant.

### III. Status of Claims

Claims 3-4, 18-20 and 27-28 are canceled. Claims 1-2, 5-17, 20-26 and 29-35 remain pending. Claims 1-2, 5-17, 20-26 and 29-35 are rejected. This Appeal involves Claims 1-2, 5-17, 20-26 and 29-35.

IV. Status of Amendments

All proposed amendments have been entered. An amendment subsequent to the Final Action has not been filed.

## V. Summary of Claimed Subject Matter

Independent Claims 1, 12 and 25 of the present application pertain to apparatus and method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing.

In Claim 1, “A computer implemented method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing” is described and shown at least in Figures 1 and 3. One embodiment, such as shown at Figures 1 and 3 and at least page 7 lines 7-10 and 302, accesses end of product life materials planning parameters 102. In addition, at Figures 1 and 3 and at least page 8 lines 30-32 and 304, one embodiment accesses end of product life pricing parameters 108.

Further, at Figures 1 and 3 and at least page 9 lines 28-32 and 306, one embodiment evaluates said end of product life materials planning parameters 102 and said end of product life pricing parameters 108 in conjunction to define said integrated action plan 114 wherein said integrated action plan 114 is an end of product life integrated action plan 114; described at least at page 15 lines 1-28.

In Claim 12, “A computer system described at least at page 6 lines 18-24 including a bus; a memory unit coupled to said bus; and a processor coupled to said bus, said processor for executing a method for defining an optimal end of product life integrated action plan 114 for procurement, manufacturing, and marketing is described and shown at least in Figures 1 and 3.

One embodiment, such as shown at Figures 1 and 3 and at least page 7 lines 7-10 and 302, accesses end of product life materials planning parameters 102. In one embodiment, as shown in Figure 2 and described at least on page 7 at lines 14-33, end of product life materials planning parameters 102 comprises static data 104 such as bill of material, parts cost, capacity consumption, and dynamic data 106 such as inventory.

In addition, at Figures 1 and 3 and at least page 8 lines 30-32 and 304, one embodiment accesses end of product life pricing parameters 108. In one embodiment, as

shown in Figure 2 and described at least on page 8 at lines 30-37, end of product life pricing parameters 108 comprise: a parameterized demand curve 110, similar to the demand curve of Figure 4, said parameterized demand curve formed using a pricing information generating technique, said pricing information generating technique obtained from the family of pricing information generating techniques comprising: auction price analyzer, consumer survey, panel of judges, and statistical regression based models, as described at least on page 8 lines 35-40.

At Figures 1 and 3 and at least page 9 lines 28-32 and 306, one embodiment evaluates said end of product life materials planning parameters 102 and said end of product life pricing parameters 108 in conjunction via an optimization engine 100, wherein said optimization engine 100, described at least at Figures 1 and 2 and 9 lines 32-35, employs a mathematical programming model and technique to define said integrated action plan 114, wherein said integrated action plan 114 is an end of product life integrated action plan 114.

In Claim 25, “A computer-readable medium having computer-executable program code embodied therein for causing a computer system to perform a method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing” is described at least at page 6 lines 18-24 and shown at least in Figures 1 and 3. One embodiment, such as shown at Figures 1 and 3 and at least page 7 lines 7-10 and 302, accesses end of product life materials planning parameters 102. In addition, at Figures 1 and 3 and at least page 8 lines 30-32 and 304, one embodiment accesses end of product life pricing parameters 108.

Further, at Figures 1 and 3 and at least page 9 lines 28-32 and 306, one embodiment evaluates said end of product life materials planning parameters 102 and said end of product life pricing parameters 108 in conjunction to define said integrated action plan 114 wherein said integrated action plan 114 is an end of product life integrated action plan 114; described at least at page 15 lines 1-28.

## VI. Grounds of Rejection to Be Reviewed on Appeal

1. Claims 1-2, 5-17, 20-26 and 29-35 stand rejected under 35 USC 103(a) as being unpatentable over Huang et al. (6151582) in view of Zussman (Zussman, Eyal; “Planning of Disassembly Systems”, Assemble Automation, 1995).

## VII. Argument

### 1. Whether Claims 1-2, 5-17, 20-26 and 29-35 are rendered obvious under 35 U.S.C. § 103(a) as being unpatentable over Huang et al. in view of Zussman.

Appellants respectfully submit that the rejection of the Claims is improper as the rejection of Claims 1-2, 5-17, 20-26 and 29-35 does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited reference.

Appellants respectfully submit that Independent Claim 1 (Claims 12 and 25 include similar features) includes the feature “defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising:

- a) accessing end of product life materials planning parameters;
- b) accessing end of product life pricing parameters; and
- c) evaluating said end of product life materials planning parameters and said end of product life pricing parameters in conjunction to define said integrated action plan, wherein said integrated action plan is an end of product life integrated action plan.”

MPEP 2141.01(a) I. states, in part,

“[I]n order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).”

Moreover, 2141.01(a) II. states, in part,

“[t]he court has found “the similarities and differences in structure and function of the inventions to carry far greater weight.” *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973).”

Appellants have reviewed Huang et al. and agree with the Examiner's assertion on page 5 at lines 15-17 that Huang et al. "[f]ails to explicitly teach a system that accounts for end of product life situations."

However, Appellants respectfully point out that the Claims clearly provide methods and systems that account for "an end of product life integrated action plan", not merely "end of product life situations" as suggested in the present Office Action.

Further, the end of product life integrated action plan is clearly recited in the Claim preamble and throughout the specification as "an end of product life integrated action plan for procurement, manufacturing, and marketing" (emphasis added).

In contrast, Appellants understand Zussman to teach the planning of end of manufacture disassembly systems (emphasis added). That is, Appellants understand Zussman to teach maximizing the recycled resources and to minimize the mass and the pollution potential of the remaining products (introduction). Moreover, Appellants understand Zussman to teach disassembly as a new area in operation planning and management for applied recovery methods after manufacturing is finished (emphasis added). In addition, at the top of page 3, the present Office Action supports the Appellants understanding of Zussman. Specifically, Page 3 of the present Office Action states, "Applicants specifically argue that Zussman is only concerned about the disassembly plan for products as an end of life plan, however, such arguments are irrelevant. The recited claims are broad such that Zussman's recitation of a disassembly plan for a product reads directly on the recited claims" (emphasis added).

As such, Appellants respectfully disagree with the assertions of the present Office Action regarding the combination of Huang et al. in view of Zussman for "defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing" (emphasis added).

In contrast, Appellants contend that such disclosure would not be a proper basis for the suggested combination since there is no teaching toward end of product life integrated action plan for procurement, manufacturing, and marketing. Further, the present Office Action provides no argument that optimal end of product life integrated action plan for

procurement, manufacturing, and marketing functionality would benefit Zussman or Huang et al. either alone or in combination (emphasis added).

As such, Appellants submit that the modifications as suggested in the present Office Action would require significant modification to the teachings and methods of operation of both Zussman and Huang et al. Further, Appellants respectfully submit that Zussman is well suited for its intended purpose for applied recovery methods and there is no disclosure within the present Office Action providing a proper basis for the combination of Zussman and Huang et al. since there is no argument that such functionality would benefit either Zussman or Huang et al. as is.

For these reasons, Appellants respectfully submit that the combination of elements as suggested by the present Office Action is based on speculation and less than a preponderance of the evidence and thus, fails to provide sufficient *prima facie* reasons for finding Claims 1-2, 5-17, 20-26 and 29-35 unpatentable under 35 U.S.C. § 103(a) over Huang et al. in view of Zussman.

In addition, Appellants respectfully submit that “[I]n order to establish a *prima facie* case of obviousness, “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention” (emphasis in original; MPEP 2141.02(VI); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

As described above, Appellants respectfully agree with the Examiner that Huang does not teach or describe a system that accounts for end of product life situations, as claimed in independent Claim 1 and similarly recited in Claims 12 and 25. The Examiner relies on Zussman for providing such a teaching. However, Appellants respectfully note that the Zussman reference must be considered in its entirety in determining whether there is motivation or suggestion to combine Zussman with Huang (emphasis added).

As stated herein, Appellants understand Zussman to teach the planning of disassembly systems (emphasis added). Thus, as recited above, by disclosing that the end of life plan is a recycling or recovery method for disassembly of products, Zussman teaches

away from the claimed embodiments of “defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising: accessing end of product life materials planning parameters; accessing end of product life pricing parameters; and evaluating said end of product life materials planning parameters and said end of product life pricing parameters in conjunction to define said integrated action plan, wherein said integrated action plan is an end of product life integrated action plan” (emphasis added).

For this reason, Appellants respectfully submit that the combination as relied upon does not establish a *prima facie* case of obviousness as the teachings of Zussman as a whole lead away from the claimed invention.

In addition, Appellants respectfully submit that “[I]n order to establish a *prima facie* case of obviousness, the prior art must suggest the desirability of the claimed invention (MPEP 2142). In particular, “[i]t is improper to combine references where the references teach away from their combination” (emphasis added; MPEP 2145(X)(D)(2); *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). Appellants respectfully note that “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention” (emphasis in original; MPEP 2141.02(VI); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

Appellants respectfully submit the combination of Zussman with Huang is improper because the references teach away from their combination. That is, a manufacturing method would obviously be teaching directly away from a disassembly and recycling method. In other words, Appellants respectfully submit that the two concepts, e.g., manufacturing and disassembling, could not be more contradictory or conflicting.

As such, Appellants respectfully assert that there is no motivation or suggestion to combine these teachings. By teaching that the end of life plan is a “disassembly” plan, Appellants respectfully assert that Zussman teaches away from an end of product life integrated action plan for procurement, manufacturing and marketing.

Thus, in view of the combination of Huang in view of Zussman not satisfying the requirements of a *prima facie* case of obviousness, Appellants respectfully submit that independent Claims 1, 12 and 25 overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition for allowance.

With respect to Claims 2 and 5-11, Appellants respectfully state that Claims 2 and 5-11 depend from the allowable Independent Claim 1 and recite further features of the present claimed invention. With respect to Claims 12-17 and 20-24, Appellants respectfully point out that Claims 12-17 and 20-24 depend from the allowable Independent Claim 12 and recite further features of the present claimed invention. With respect to Claims 26 and 29-35, Appellants respectfully point out that Claims 26 and 29-35 depend from the allowable Independent Claim 25 and recite further features of the present claimed invention. Therefore, Appellants respectfully state that Claims 2, 5-11, 13-17, 20-24, 26 and 29-35 are allowable as pending from allowable base Claims.

For these reasons, Appellants respectfully submit that the rejection of the Claims are improper as the rejection of Claims 1-2, 5-17, 20-26 and 29-35 under 35 U.S.C. § 103(a) does not satisfy the requirements of a *prima facie* case of obviousness as claim features are not met by the cited references. Accordingly, Appellants respectfully submit that the rejection of Claims 1-2, 5-17, 20-26 and 29-35 under 35 U.S.C. § 103(a) is improper and should be reversed.

#### Response to Arguments

In the response to arguments section at the top of page 3, the present Office Action states, “Applicants specifically argue that Zussman is only concerned about the disassembly plan for products as an end of life plan, however, such arguments are irrelevant. The recited claims are broad such that Zussman’s recitation of a disassembly plan for a product reads directly on the recited claims.”

Appellants respectfully disagree. Appellants respectfully submit that the Claims clearly recite “defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising: accessing end of product life materials planning parameters; accessing end of product life pricing parameters; and evaluating said end of

product life materials planning parameters and said end of product life pricing parameters in conjunction to define said integrated action plan, wherein said integrated action plan is an end of product life integrated action plan” (emphasis added).

MPEP2173.05(a)

The meaning of every term used in a claim should be apparent from the prior art or from the specification and drawings at the time the application is filed. Applicants need not confine themselves to the terminology used in the prior art, but are required to make clear and precise the terms that are used to define the invention whereby the metes and bounds of the claimed invention can be ascertained. During patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification. *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Prater*, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969). See also **MPEP § 2111 - § 2111.01**. When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989).

Appellant respectfully submits the “end of product life integrated action plan for procurement, manufacturing, and marketing” words of the claim must be given their plain meaning. In other words, they must be read as they would be interpreted by those of ordinary skill in the art. *In re Sneed*, 710 F.2d 1544, 218 USPQ 385 (Fed. Cir. 1983). Moreover, the end of product life integrated action plan terminology is clearly defined in the Specification and the Figures as being directed toward procurement, manufacturing, and marketing which is distinctly opposite from a disassembly plan.

Further, Appellants respectfully submit “preamble may provide context for claim construction, particularly, where ... that preamble’s statement of intended use forms the basis for distinguishing the prior art in the patent’s prosecution history.” *Metabolite Labs., Inc. v. Corp. of Am. Holdings*, 370 F.3d 1354, 1358-62, 71 USPQ2d 1081, 1084-87 (Fed. Cir. 2004).

“If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is ‘necessary to give life, meaning, and vitality’ to the

claim, then the claim preamble should be construed as if in the balance of the claim.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). See also *Jansen v. Rexall Sundown, Inc.*, 342 F.3d 1329, 1333, 68 USPQ2d 1154, 1158 (Fed. Cir. 2003).

For these additional reasons, Appellants respectfully submit that the recited feature “end of product life integrated action plan” as used in the Claim and described in the Specification, clearly teaches toward “procurement, manufacture and marketing” and clearly teach away from “a disassembly plan” as taught by Zussman.

Conclusion

Appellants believe that pending Claims 1-2, 5-17, 20-26 and 29-35 are directed toward patentable subject matter. As such, Appellants respectfully request that the rejection of Claims 1-2, 5-17, 20-26 and 29-35 be reversed.

Appellants wish to encourage the Examiner or a member of the Board of Patent Appeals to telephone the Appellants' undersigned representative if it is felt that a telephone conference could expedite prosecution.

Respectfully submitted,  
Wagner Blecher LLP

Dated: 4/18/2008

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## VIII. Appendix - Clean Copy of Claims on Appeal

1. A computer implemented method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising:
  - a) accessing end of product life materials planning parameters;
  - b) accessing end of product life pricing parameters; and
  - c) evaluating said end of product life materials planning parameters and said end of product life pricing parameters in conjunction to define said integrated action plan wherein said integrated action plan is an end of product life integrated action plan.
2. The method as recited in Claim 1, wherein said integrated action plan comprises: a build plan, a procurement plan, and a sales and pricing plan.
5. The method as recited in Claim 1, wherein said end of product life materials planning parameters comprise:  
bill of material, and inventory.
6. The method as recited in Claim 1, wherein said end of product life pricing parameters comprise:  
a parameterized demand curve formed using a pricing information generating technique.
7. The method as recited in Claim 1, wherein said evaluating said end of product life materials planning parameters and said end of product life pricing parameters is done via an optimization engine employing a mathematical programming model and technique.
8. The method as recited in Claim 7, wherein the goal of said optimization engine is maximization of product gross profit.
9. The method as recited in Claim 7, wherein the goal of said optimization engine is optimizing the trade-off between product gross profit maximization and inventory write-off cost minimization.
10. The method as recited in Claim 7, wherein business rules are applied to said optimization engine.
11. The method as recited in Claim 10, wherein said business rules comprise:

objectives, budgets, parts procurement limits, and build capacity.

12. A computer system comprising:

a bus;

a memory unit coupled to said bus; and

a processor coupled to said bus, said processor for executing a method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising:

a) accessing end of product life materials planning parameters, said end of product life materials planning parameters comprising:

bill of material, parts cost, capacity consumption, and inventory;

b) accessing end of product life pricing parameters, said end of product life pricing parameters comprising:

a parameterized demand curve, said parameterized demand curve formed using a pricing information generating technique, said pricing information generating technique obtained from the family of pricing information generating techniques comprising:

auction price analyzer, consumer survey, panel of judges, and statistical regression based models; and

c) evaluating said end of product life materials planning parameters and said end of product life pricing parameters in conjunction via an optimization engine, wherein said optimization engine employs a mathematical programming model and technique to define said integrated action plan, wherein said integrated action plan is an end of product life integrated action plan.

13. The computer system of Claim 12, wherein the goal of said optimization engine comprises:

maximizing product gross profit, or optimizing the trade-off between product gross profit maximization and inventory write-off cost minimization.

14. The computer system of Claim 13, wherein business rules are applied to said optimization engine.

15. The computer system of Claim 14, wherein said business rules comprise:  
objectives, budgets, parts procurement limits, and build capacity.

16. The computer system of Claim 15, wherein said objectives comprise:  
revenue, write-off, and profit.

17. The computer system of Claim 12, wherein said integrated action plan further comprises:

a build plan, a procurement plan, and a sales and pricing plan.

20. The computer system of Claim 17, wherein said integrated action plan is further comprised of metrics.

21. The computer system of Claim 20, wherein said metrics comprise:  
revenue, write-off, profit, and shadow prices.

22. The computer system of Claim 12, wherein said end of product life pricing parameters are obtained from a discrete said parameterized demand curve.

23. The computer system of Claim 12, wherein said pricing parameters are obtained from a continuous said parameterized demand curve.

24. The computer system of Claim 12, wherein said mathematical programming model and technique is obtained from the family of mathematical programming models and techniques comprising:

mixed integer models, linear models, non-linear models, and techniques such as simplex methods, interior point methods, branch and bound (cut), constraint programming, and meta-heuristics.

25. A computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method for defining an optimal end of product life integrated action plan for procurement, manufacturing, and marketing comprising:

- a) accessing end of product life materials planning parameters;
- b) accessing end of product life pricing parameters; and
- c) evaluating said end of product life materials planning parameters and said end of product life pricing parameters in conjunction to define said integrated action plan, wherein said integrated action plan is an end of product life integrated action plan.

26. The computer-readable medium of Claim 25, wherein said integrated action plan comprises:

a build plan, a procurement plan, and a sales and pricing plan.

29. The computer-readable medium of Claim 25, wherein said end of product life materials planning parameters comprise:  
bill of material, and inventory.

30. The computer-readable medium of Claim 25, wherein said end of product life pricing parameters comprise:  
a parameterized demand curve formed using a pricing information generating technique.

31. The computer-readable medium of Claim 25, wherein said evaluating said materials planning parameters and said pricing parameters is done via an optimization engine employing a mathematical programming model and technique.

32. The computer-readable medium of Claim 31, wherein the goal of said optimization engine is maximization of product gross profit.

33. The computer-readable medium of Claim 31, wherein the goal of said optimization engine is optimizing the trade-off between product gross profit maximization and inventory write-off cost minimization.

34. The computer-readable medium of Claim 31, wherein business rules are applied to said optimization engine.

35. The computer-readable medium of Claim 34, wherein said business rules comprise:  
objectives, budgets, parts procurement limits, and build capacity.

## IX. Evidence Appendix

No evidence is herein appended.

## X. Related Proceedings Appendix

No related proceedings.